

ABSTRACT

5 A print engine/controller (10) to drive an ink drop print head has an interface (22)
at which to receive compressed page data, decoders (28,88) to decode respective
types of image planes in the received compressed page data, and a half-
toner/compositor to (29) composite image plane data, the half-toner/compositor
including a dot merger unit (58) taking bits from the respective planes as inputs
and a color mask register (61) holding masking bits in number equal to the
10 number of image planes, respective input bits to the dot merger unit being ANDed
with respective color mask register bits and the resultant bits Ored together to
form an output bit in a channel for which there is an ink at the print head. The
respective planes to the dot merger unit may include three contone color planes
and a high resolution spot plane, and the color mask register is loaded with bits
15 that are selected to place the high resolution spot plane into any one of the
respective color channels at the print head. A fixative channel may be generated
from any one or more of the respective planes and selected by what bits are
loaded to the color mask register. The respective planes to the dot merger unit
(58) may include three contone color planes and a bi-level spot plane and the
20 color mask register (61) may be loaded with bits that are selected to split a K
plane into C, M, and Y channels for output to a print head without K.